

A Comparison of Australian and Canadian Wine Buyers Using Discrete Choice Analysis

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Abstract

The globalisation of the wine industry is causing more and more wine producers to consider the implications of exporting wine to different countries. This paper provides an analysis of the similarities and differences in the choice behavior of consumers from two very different wine drinking countries. Wine consumers from each country engaged in simulated choices of brands differing by brand name, region of origin, price and award (medal). An analysis of the choice probabilities showed similarities for high and low involvement consumers, regardless of country. The biggest country differences were in the use of the region of origin cue and to a lesser degree a gold medal, which had a greater effect for the Australian consumers. The implications of the differences and similarities for wine marketing are discussed along with an agenda for future research.

Introduction

The international wine industry is increasingly affected by a number of significant trends. First, the industry is impacted by the increasing globalisation of distribution. This is a result of changes both in global wine consumption patterns and the consolidation of wine businesses internationally. Wine consumption continues to shrink in traditional wine producing countries (from a high base) and increase in non-producing countries. As such, many wine producing countries are feeling pressure to find new markets for their wine.

Second, there are major changes in the planting and distribution of vines across geographical regions. The New World wine producing countries (Australia, Argentina, Chile, New Zealand, United States and South Africa) are challenging the Old World's dominance of the world's wine (Anderson et al 2002). Excluding intra-European Union trade, the New World's share of world wine trade has grown from 14% to 35% between 1990 and 2000 while the Old World's share of the world wine trade has declined from 67% to 48% for the same period (Anderson et al 2002). These trends have all led to an increasingly competitive landscape for wine.

Furthermore, the wine category is driven by a unique combination of key product and consumer factors, which result in a number of complexities. First, the category of wine is complex, primarily due to number of SKUs (stockkeeping units) available for consumption. This far outweighs that of any other major food or FMCG category, and the variation within product and brand groups can change from one vintage to the next. Compared with other branded categories such as washing detergent or soft drinks where a few brands control the greater share of the whole market, the wine category has many brands sharing very small shares of the whole category (Jarvis et al 2003; Tustin 2001).

Second, wine has a unique set of product complexities, being a composite of both extrinsic and intrinsic product attributes. Intrinsic attributes are those that are inherent within the wine itself such as taste, type, varietal or blend, alcohol content, and age. Extrinsic attributes are those that are not part of the physical product such as brand, price and label/package (Hall et al 2001; Chaney 2002). Most wine is purchased by consumers in a situation where they do not have the opportunity to base their purchase decision on intrinsic cues – that is, the opportunity to taste the product before the point of purchase. This increases the reliance placed by the consumer on the extrinsic attributes which are available to them. The four most common extrinsic attributes identified in research concerning wine choice behaviour are

brand, region or country of origin, grape variety and price (Jarvis et al 2003; Lockshin et al 2004; Olsen and Thach 2001). It is clear that wine, as a category, has more and varied attributes than other grocery store products.

For practitioners to develop sustainable wine products that will compete effectively in the global marketplace, it is essential to understand the ways in which consumers relate to wine during the purchase decision-making process. If wine companies better understood the key attributes that drive consumer choice, they could better develop these attributes via the opportunities presented in the marketing mix. At the same time, large wine companies around the world must develop product offerings for multiple markets and decide which attributes should be communicated through their marketing mix. Therefore, understanding the consumer decision-making process within the wine category is both imperative and complex.

The primary objective of this research was therefore to investigate how consumers utilise the key extrinsic product cues during their purchase decision for wine in two different markets. Specifically, this paper uses discrete choice analysis in two developed wine markets, Canada and Australia, to investigate the relative value of the most important extrinsic product attributes. Previous research has shown that the level of product involvement affects the strength of attributes in wine choice behaviour (Lockshin et al 1997; Lockshin et al 2004) and that involvement level may be more important than nationality in modeling wine choice (Aurifeille et al 2002; Lockshin et al 2001). Product involvement will also be compared across the two markets.

We develop our paper in the following way. First we review the literature on wine choice behaviour, including sections on risk reduction, product attributes and product involvement. We then briefly discuss the literature on discrete choice. We provide an outline of the experimental design and data collection with more detail on the mechanics of the actual comparisons. We then present the findings which compare the levels and weightings measured in each of the two markets. Finally, we discuss the implications of the findings for the development of successful wine products in mature wine drinking markets.

Literature Review

Product Attributes and Risk

Wine is a product where the elements of risk during the decision making process are significant for the vast majority of consumers (Batt and Dean 2000; Thomas and Pickering 2002; Spawton 1997). This occurs, in part, as a result of the perceived relationship between the person buying the wine and the wine itself Spawton (1997). It has been suggested that wine can be intimidating due to a range of factors, including its complexity (many tastes, manufacture methods, regions of origin, brands, prices, vineyards); the 100,000s of different labels available for purchase; a general lack of wine product knowledge by consumers; the perceived formality of wine and the variability of style, vintage and variety (Batt and Dean 2000; Spawton 1997; Olsen and Thach 2001). It is suggested that, with the exception of a small segment of consumers, most wine consumers are highly '*risk-sensitive*' to the extent that the way they choose wine is driven by risk-reducing strategies. (Mitchell and Greatorex 1989)

In order to reduce the risk, consumers will purchase wine that presents the least amount of perceived risk (Mitchell and Greatorex 1989). But what do consumers do to reduce the perceived risk of a wine purchase? It has been identified that if the opportunity presents, consumers will choose a wine which has been previously purchased and tasted; has an 'informal' or 'formal' endorsement of a third party source; originates from a region or country from which the consumer has previously purchased or is made from a grape variety

with which the consumer also has previous knowledge or experience. In Europe research by Skuras and Vakrou (2002); Koewn and Casey (1995) and Gluckman (1990) suggest that country of origin is a primary and implicit consideration of consumers in their decision to purchase wine, and recent research in Australia (Jarvis et al 2003; Lockshin et al 2004; Tustin and Lockshin 2001) has confirmed region to have a major impact on wine purchase. However, Batt and Dean (2000) found that the origin of the wine was the third most important variable influencing consumers' decision to purchase wine in Australia. Research in Europe has shown region to be most important in the mainland European wine producing countries of Germany, France, and Austria, and second most important in the UK (Perrouy et al 2004).

In addition, consumers also rely on cues such as information found on the back label (Charters et al 1999) or the image of the store in which the wine is being sold. Often however, consumers simply choose wine according to its price – price being a proxy for quality (Batt and Dean 2000; Chaney 2002; Charters et al 1999; Hall et al 2001; Mitchell and Greatorex 1989; Olsen and Thach 2001; Spawton 1997; Thomas and Pickering 2002). As such price is often a primary cue, which is utilised to indicate wine quality (Szybillo and Jacoby 1974; Olson 1977). Koewn and Casey (1995) found that pricing was extremely important to all respondents in a study of wine purchasing influences. Similarly, in a study conducted by Jenster and Jenster (1993), price was an overriding criterion in making the purchase decision among European wine consumers.

Simply stated, a product is a set of attributes. Consumers use a product's attributes to assist them in the selection, while enabling them to reduce the risk of the purchase decision. They often use more than one attribute – in fact using a combination of different attributes to make the choice. Those users with more expertise use more complex combinations of attributes than do wine consumers with less perceived expertise (Perrouy et al 2004) It has been reported that whilst 'previous experience' (previously tasted) was the most important driver of choice (Batt and Dean 2000), the four most common extrinsic attributes measured in research are brand, region or country of origin, grape variety and price (Jarvis et al 2004; Olsen and Thach 2001). However, many other attributes have been studied such as wine color, label/package design, medals or awards, alcohol content, age, vintage year, wine style and positioning statements (Hall et al 2001, Jarvis and Rungie 2002, Lockshin et al 2004; Tustin and Lockshin 2001, Batt and Dean 2000, Shaw et al 1999, Chaney 2000).

This study however, will not examine the importance or utility of grape variety as it has been well studied in other markets with relatively consistent results – the presence of a varietal name is more useful to consumers than the absence of a varietal name (Perrouy et al 2004). Most wine companies make several varietal wines and each of these might be used in different situations, so this research does not focus on variety choice.

As identified above, each attribute, however, does not carry the same 'weight' in the decision making process for each consumer (Jarvis and Rungie 2002). Given that a product is a set of attributes, wine makers and wine marketers have the ability to create the 'right' set of attributes for their target consumer assuming that they know which attributes are the most important and which carry the most 'weight' (or utility). However, determining the right set of attributes may not be as simple as it sounds given that not all consumers behave the same and that different consumers, in different situations, use different attributes, with different weightings placed on each. This is further complicated by most exporting wine companies targeting several markets and needing to develop sets of attributes (products) for a range of market opportunities in different countries.

Product Involvement

In addition to considering the product cues that are inherent in wine, we also examine the consumer characteristic of product involvement. Involvement has been conceptualised as the interest, enthusiasm, and excitement that consumers manifest towards a product category (Bloch 1986; Goldsmith et al 1998). The model proposed by Lockshin et al (1997) suggested three dimensions of involvement influenced wine purchase: product involvement, brand involvement and purchase involvement. More recent research has tended to focus only on the single dimension of product involvement, however (Lockshin et al 2001; Aurifeille et al 2002; Lockshin et al 2004). Wine purchase behaviour is a complicated issue in that the level of knowledge and interest are significant factors dictating the processes undergone by the consumers (Gluckman 1990; Perrouty et al 2004). Involvement has been linked to wine purchase decision making (Lockshin et al 1997; Quester and Smart 1998), where high and low involvement wine buyers have been shown to behave differently, (Lockshin et al 2001) on factors such as price, region and grape variety, (Zaichkowsky 1988; Quester and Smart 1998; Lockshin et al 2004), consumption situation, (Quester and Smart 1998), medals and ratings (Lockshin 2001; Lockshin et al 2004) and quantity consumed (Goldsmith et al 1998). Higher involved consumers utilise more information and are interested in learning more, while low involvement consumers tend to simplify their choices and use risk reduction strategies.

A review of wine marketing research also reveals that, like in many product categories, a consumer's involvement in the wine category impacts the way in which they make purchase decisions and how they use wine attributes in the selection process. Involvement has been used in a variety of marketing studies since Sherif and Cantril (1947) first presented the concept. Involvement is a motivational and goal-directed emotional state that determines the personal relevance of a purchase decision to a buyer (Rothschild 1984). Involvement is thought to exert a considerable influence over consumers' decision processes (Laurent and Kapferer 1985; Quester and Smart 1998). Researchers have typically analysed the influence of product involvement on consumers' attitudes, brand preferences, and perceptions (Brisoux and Cheron; 1990; Celsi and Olson; 1988; Quester and Smart 1998). Lockshin (2001) suggests that consumers generally fall into one of two segments: those who are involved in wine and those uninvolved in wine. An individual who is highly involved in wine is likely to spend time considering and contemplating consumption situations, they enjoy learning about wine and they generally take a more 'cognitive' approach to all aspects of wine be it back labels, advertisements or point-of-sale materials -- wine holds an important place in their lives and their persona (Batt and Dean, 2000; Lockshin 2001). When choosing a wine, low involvement consumers behave differently – they rarely talk to salespeople, they prefer to make quick purchases, they tend not to read back labels and they are mainly influenced by point-of-purchase materials (Charters et al 1999; Lockshin 2001; Quester and Smart 1998).

Previous research on utility of wine attributes

Several recent papers studying the utility of brand, region and price on consumer choice of wine have been identified. Though other attributes were studied, all three studies had these attributes in common. Research was undertaken in Australia (Jarvis and Rungie 2002; Jarvis et al 2003; Lockshin et al 2004; Tustin and Lockshin 2001), while Perrouty et al (2004) undertook similar research in the UK, Germany and France. Tustin and Lockshin (2001) found that region, then price and then brand had the most utility in consumers' wine choice. Contrarily, Jarvis and Rungie (2002) found that brand, then price, and then region had the most utility. While both studies were performed in Australia, each used a different source for their data. The Tustin study used a stated choice experiment with 300 wine consumers, while Jarvis and Rungie (2002) used the actual purchases (revealed choice) of 1092 households over

a one year period that had been collected by a major Australian liquor chain. They used multinomial logit analysis to reveal the utility of each of the attributes. It is arguable that the Jarvis and Rungie study provides a more useful picture of real consumer behaviour because they used real consumer data while Tustin used a 'stated choice' methodology. However, Tustin and Lockshin were able to tabulate their data against how 'wine involved' the respondent was. They found that low involvement wine consumers used price, region and then brand as the most important attributes when choosing wine, the same as Jarvis and Rungie. High involvement consumers used region and then price, and according to their results, brand did not have a significant impact on choice.

The study by Perrouty et al (2004) also used stated choice methodology, but tested more attributes and more attribute levels than Tustin and Lockshin (2001). The study revealed that the most consumers place different utilities on product attributes depending on the country in which the consumer lives. For example, in the UK consumers utilized brand the most, followed by region, and then price. In Germany it was found that region, brand and price were utilized by consumers (in that order). In France it was region, price, and then brand. So on one hand, the findings seem to support those found by Jarvis in Australia (i.e. that brand is the most important) and on the other, the results do not paint a consistent picture (Germany and France found region to be the most important). The difference in results may arise from the fact that Germany and France have far older and more established wine cultures that are based on regional designations (appellations in France) rather than brand names as in Australia. However, it could highlight the similarities in the way consumers behave in two apparently similar Anglo-Saxon countries (UK and Australia). Perhaps it is the fact that Australian wines are the market leaders in the UK and that the UK consumer is now used to buying branded wines. Another and more likely reason is that the most popular Australian wines around the world are blended from multiple regions and do not have a regional designation. When the price of the wine is higher, then region becomes more important than brand name (Lockshin et al 2003). High involvement wine consumers are more likely to buy wines at higher prices than low involvement consumers (Tustin and Lockshin 2001; Lockshin et al 2004), so it may be that region is more important for these consumers due to the offerings available in the market. The research by Jarvis et al (2003) showed that in a large revealed preference study of over 4000 wine consumers, the overall order of repeat purchase probability was to price point, region, white varietals, brand name, and red varietals in that order.

With respect to consumer involvement in wine, the Perrouty study (2004) did not appear to show any consistent trends across countries, though it is apparent that low involvement and high involvement consumers do place different importances and/or utilities on each of the wine attributes studied within a country. The authors did find that consumers with higher perceived wine expertise used more information and more complex combinations of information in making their wine choices than consumers with lower perceived wine expertise.

It has thus been established that wine consumers in fact do use attributes to choose wine and that combinations of attributes can be used to simulate and predict choice. However, research also has demonstrated how consumers use wine attributes to choose a wine. Hall and Lockshin (2000) for example suggest that "*while consumers choose wine based on the attributes, that the choice is 'filtered' through the consumption occasion and/or who might be participating in the consumption occasion*".

It has also been suggested that different segments of wine buyers probably use different purchasing strategies (Charters et al 1999). More knowledgeable wine buyers use more cues

and a wider range of resources when making a wine purchase than less knowledgeable consumers (Perrouy et al 2004; Rasmussen and Lockshin 1999).

Methodology

The aim of this study was to compare the value or utility of wine attributes between the wine consumers of two countries. It is apparent from the literature review that the product involvement level of the consumer has a large impact on the use of different wine attributes in wine choice behaviour. It is also clear that among the many attributes available price, brand name, and region are important predictors of actual choice (Lockshin et al 2004; Perrouy et al 2004). However, marketers should be less concerned with predicting an individual purchase than with understanding how the cues interact to predict or understand overall purchase rates for groups or segments of consumers. Conjoint analysis (Green and Srinivasan 1978) has been used to model the decision rules consumers use when making product choices using multiple attributes. These early models have been broadened to utilise simulated choices rather than rankings or ratings. Discrete choice analysis (often called choice-based conjoint analysis or stated choice) asks the consumer to make a choice from a set of product concepts and these choices are converted to ‘utilities’ or part-worths for each of the levels of the individual attributes using multinomial logit (Louviere and Woodworth 1983; Louviere et al 2000; McFadden 1973).

As noted above, trying to model all the influences on wine purchase behaviour is complex and the total number of attributes could make the design of such an experiment much too large to be practical. We chose to use the brand name of the wine, the region of origin, price, and whether or not the wine had won an award (gold or bronze medal) as the key cues under investigation. We controlled for situation and for grape variety by stating for each choice task, “you are standing in front of a shelf of wines in a wine shop and are deciding on a bottle of Shiraz wine to purchase to serve at home tonight for an informal dinner with family and some friends. Which of the following wines would you choose”? We added the option of “I would not choose any of these wines” to allow for the possibility that none of them met the purchase requirements. This situation was used, because it is one of the most common wine consumption situations (Hall and Lockshin 2000).

We developed the levels (list) of the brands and regions used in this experiment from available data on the market share and salience of brands and regions in the Australian wine market and the same information in the Canadian market. We also utilised some of the same brands and regions from previous discrete choice wine experiments conducted in Europe (Perrouy et al 2004) to allow for eventual comparisons. Our goal was to have a range of brands and regions from the largest or most well-known to the smallest or least well-known, so that we could make some generalisations about consumer choice when choosing among brands and regions that were either well known or completely unknown and a few in between. We used four prices, again providing a range from realistically low prices for commercial quality wines to high prices typical of boutique wines. The awards were gold, bronze and no award (left blank). These are typical awards in Australia and in North America and we wanted to have the highest award (gold) and a low level of award (bronze). We used ‘no award’ twice (as two identical levels) to make sure it appeared at least as often as gold or bronze in the design. The list of the levels of brands, regions, prices and awards is provided in Tables 1A and B.

--insert Tables 1A and B here--

The participants were provided with four product concepts plus the “I would not choose any” on a single page and were asked to select the bottle of Shiraz wine they would choose to

buy to have with friends and family tonight for an informal dinner. Each product concept had one level of each of the four attributes (see Figure 1 for an example of a choice task). The levels of the attributes were randomised across the 300 surveys generated in each country using Sawtooth Software's Choice-Based Conjoint Software, which has an algorithm to insure each level of each attribute appears an equal number of times across all surveys, but does not repeat more than once in the other product concepts in each choice task. Each respondent was provided 20 different choice tasks, as if they made 20 different purchase decisions.

--insert Figure 1 here--

Respondents were given a short survey along with the choice tasks. A seven point Likert-type scale with seven items was administered to test wine involvement (Lockshin et al 1997), and demographics and frequency of wine consumption were also collected. Surveys were handed out to shoppers in four different wine stores in Adelaide, Australia chosen to represent both fine wines and discount wines. (Wine is sold only in specialty alcohol beverage stores and not in grocery stores across most of Australia). Surveys were taken on different days and at different times to increase the diversity of the convenience sample (Calder et al 1982). Trained interviewers handed out the self completion surveys and answered any questions while the surveys were filled out. A total of 300 surveys were handed out and 250 usable ones form the data from Australia in this research. In Canada, two locations were chosen to collect the data within the province of Ontario, Canada. The two locations were within or near wine retail stores, therefore increasing the chance of finding respondents who had purchased wine 'within the last twelve months'. Potential respondents were given a note that asked if they would consider completing a questionnaire – the only criteria was that they must be Canadian residents, they must have personally purchased wine within the past year, and that they must be over 19 years of age (the legal drinking age in Canada). Qualified respondents (who agreed to participate) were then given the questionnaire which was self-administered but supervised by a trained interviewer. 323 questionnaires were completed though 23 were spoiled resulting in 300 completed questionnaires.

The discrete choice data were analysed using the Sawtooth Software Choice-Based Conjoint multinomial logit program. The levels of the attributes are coded so that the utilities add up to zero in each attribute category. The involvement items were factor analysed and one factor with 67% of the variance extracted was returned. The ratings for each of the seven items were summed for each respondent and an involvement score ranging from seven to 49 was calculated for each respondent. The respondents were split at the median value of 34 to create high and low involvement groups. Thus, high involvement consumers averaged five points or greater on the seven point scale across all the items.

Each split group was run separately using the same multinomial logit analysis. The choice of whether the model was improved by breaking it into involvement levels was made by calculating the amount of improvement in the log likelihood for each method when compared to the total sample. The total sample log likelihood (LL0) was subtracted from the sum of the log likelihood for each of the split samples (LL1). Two times the difference between the log likelihoods [$2*(LL1)-(LL0)$] is distributed as chi-square (Louviere, Hensher and Swait 2000). The two split samples were statistically superior to the full sample. Table 2 (below) shows clearly that the involvement segmentation provides the best fit to the data in both countries. Consequently, we model the high and low involvement consumers separately in order to see differences in how they respond to the cues provided.

--insert Table 2 here--

Once the utilities for high and low involvement consumers in each market were obtained, the method of comparison had to be decided. There is some argument in the discrete choice literature as to whether utilities can be compared between different experiments (Louviere and Woodworth 1983; Louviere et al 2000; McFadden 1973). The argument rests on the fact that the error terms, which are used to determine the utilities are not comparable, so there can be a 'scale effect' where the utilities between the experiments vary by some unknown scale parameter. In practice, the utilities are determined by the number of attributes and the levels of each, as well as the heterogeneity of the actual choices by the participants. In this research, the experiments were designed identically in terms of number of attributes and levels. The utility values from each country for each set of attributes have similar ranges, with no obvious outliers. To be sure, we produced scatter plots of the utilities for each attribute to plot whether or not they seemed to vary in the same way and with the same scale. These showed a strong correspondence for price and award with correlation coefficients of $\sim 0.95+$, but a lesser correspondence for brand and region (correlation coefficients of $\sim 0.4-0.6$). This indicates that Canadian and Australian respondents seemed to use price and award similarly and with the same level of utility. However, this is not true for brand and region, but since these were varied between the two countries, it is not surprising they are not as similar as price. Because overall the utilities were similar in size and range, we decided to continue and compare them. The reader should be advised that only the overall pattern of utilities for region and brand are directly comparable between countries, and that direct comparisons between Australia and Canada cannot be made.

Results

We provide the results below in a series of bar charts of the utilities, by country and involvement. Although the utilities are reported as positive and negative, their relative size is what we compare. Multinomial coefficients are interpreted as 'part-worths; it is their total (ie, brand + region + price + medal) that is used to predict the choice of a particular product. We provide results for brand, region, price and award in separate charts. First, however, we compare the overall results by computing the overall importance of each category of attributes to show the overall differences. Figure 2 highlights that overall Australians paid more attention to region and brand, while the Canadians focused more on price. Low involvement Canadians were more influenced by brand and higher involvement Canadians place more weight on price. Low involvement Australians used price and award to a greater degree than did high involvement Australians.

--Insert Figure 2 here--

--Insert Figure 3 here

Figure 2 compares the utility value of different brands in the two countries. Jacobs Creek is well known in both countries. A well known local brand was chosen for each country and then a high quality brand in each country. An unknown brand from France, Celliers des Dauphin was used to show the effect of a totally unknown wine brand. Jacobs Creek as a brand adds most to the purchase probability of low involvement Australians. This is not surprising, because it is the highest market share brand in Australia. It is more likely to be purchased by high involvement Canadians, than low involvement ones, while high involvement Australians are more likely to buy a well known local brand or high quality brand. In Canada, the low involvement wine buyers find the most utility in a well known local brand (Peller Estates), but much less in a less well known high quality brand (Robert Mondavi). The Australians, high and low involvement, find more utility in the high quality brand, than in the well known local brand. It is clear that being an unknown brand with a French-sounding name reduces the likelihood of purchase, especially for the Australians,

where few French brands are available in the market as compared to Canada.

--Insert Figure 4 here--

In this comparison, we used the largest Australian region in both countries, and then a well-known local and a not well known local region within each country (Figure 3). It is clear that Southeastern Australia is considered more highly in Canada than in Australia. The region is really an amalgamation of all the major wine regions (excepting Western Australia) and is normally used for commercial grade blended wines. High involvement buyers are more disposed to SE Australia than low involvement consumers. The well known region (Coonawarra in Australia and Ontario in Canada) adds more to the purchase probability for Australians than to Canadians. Perhaps Australians are more disposed towards wine regions, or perhaps Coonawarra is better perceived than Ontario for fine wines. High involvement Australians give more credence to a well known region, while it is low involvement Canadians who are more impressed. It is clear that a wine from SE Australia (well known in both countries) or a well known local region is more likely to be purchased than a wine from a less well known region in either country. High involvement Australians obviously are more likely to buy wines from known versus obscure wine regions.

--Insert Figure 5 here--

The patterns of utility for price are similar across the two countries. The lowest priced and highest priced wines (all else being equal) are least likely to be purchased, though the highest priced wines are by far the least likely. Wine in the popular premium price point adds little to the Canadian buyers' probability and decreases the Australians', especially the high involvement consumer. The high involvement Australians find some utility in the next price point, while all the others find this adds the most to their purchase probability. High involvement Australians find the most utility in the super premium price point when entertaining friends at home.

--Insert Figure 6 here--

The chart shows the utility values for awards/medals on 750ml red wine bottles, all else being equal (price, region, brand) for high and low involvement levels. Overall, Canadians and Australians at high and low involvement are relatively similar in their response to wine awards. These utilities indicate the amount added to the probability for choosing a specific bottle of wine. A gold medal increases the probability of purchase across country and involvement level, bronze has almost no effect, while no medal has a slight negative effect on purchase probability. Australians are generally more responsive than Canadians to gold medals, though it is low involvement Australians compared to high involvement Canadians, who are most affected.

Conclusions and Managerial Implications

As identified in the introduction of this research paper, the wine industry is currently impacted by the increasing globalization of distribution and increased competition - primarily due to production volumes increasing ahead of consumption volumes. Therefore, the need for wine producers and wine brand owners to understand the triggers that influence the consumer to purchase wine are increasingly important. In particular, the previous research in this field clearly demonstrates that to increase the incidence of purchase of a particular wine, an understanding of the way in which consumers utilise extrinsic products cues is essential. This research concurs with previous research, which has demonstrated that the extrinsic product cues of region, price, brand and award do indeed influences how the consumers' decision

process works when they are purchasing wine. When interpreting the findings of this study, several conclusions can be drawn.

General patterns of behaviour

Firstly, there are clear and consistent patterns that emerge when analyzing the findings associated with all of the respondents across each of the four product attributes tested. When considering the utilities recorded across the four respondent groups associated with brand, it is clear that an unknown brand does indeed lessen the likelihood of purchase when well-known brands are also available to purchase. Also, when looking at the utilities recorded for regions of origin, the incidence rate of selecting wines produced in a little known region reduces the likelihood of the wine to be selected for purchase. Furthermore, the evidence is conclusive with regards to the impact of different price levels. All respondent groups indicated that they are likely to be positively influenced by wine priced in the mid-price categories, as opposed to wines which either carry a low or very high price tag. Finally, a consistent set of findings were also recorded when examining the way in which the respondents react to wine awards. Here, the positive effect of a wine displaying a gold award can be clearly seen for all respondents, whilst a lesser award or lack of award will not positively impact consumers' decision to purchase.

The conclusion that can be drawn from the set of consistent patterns which emerge from this research is that wine producers and brand owners selling across a number of established wine consuming markets can positively influence the propensity to purchase their wines by their use and display of extrinsic product cues. In general, wine purchasers will react more favourably to known brands and regions, in the mid-price points and with the endorsement of a top wine award. Clearly, wine brand owners and producers cannot, for example, change their region of origin and are restricted by local labeling and administrative requirements (e.g. the French appellation system). However, they can position the use of country of origin or region more prominently on the label and select not to present lesser wine awards, for example. This enables them to reduce the perceived risk of purchase, which has been clearly identified as an issue for many wine consumers.

Consumer involvement

A further key conclusion that can be drawn from this study is that high involved and low involved consumers place different utility weightings on the range of extrinsic product cues available to them at the point of purchase for wine. By understanding the involvement of the target audience for a particular wine, wine brand owners can positively influence the likelihood of purchase of their wines.

Low involved consumers place most weight on the highest market share brands available in their local market, indicating that both awareness and visibility act as key risk reducers for low involved consumers. For high involved consumers, we see that a high quality brand, rather than one with high market share, holds the most resonance. What is interesting to note here is that even high involved consumers tend towards risk reducing strategies during the wine purchase process, as they also will tend not to buy unknown brands. This suggests that discovery and trial via unknown brands is not necessarily a positive position for wine producers and brand owners to take, particularly if the region of origin is also not well known by the target consumers.

When considering the associations that high and low involved consumers have with specific

regions of origin however, the findings of this study are somewhat inconclusive. We can conclude however, that the negative impact of a lesser known region of origin will impact more on higher involved consumers than low involved consumers. Therefore, the issues associated with lesser known regions are more dramatic for wines targeted at higher involved consumers and typically higher price levels. The recommendation drawn from this study is therefore that producers originating from lesser known regions should focus on building consistent brands with consumer recognition and should position their wines for low involved consumers. This again explodes the myth that high involved consumers are necessarily looking for undiscovered and previously unheard of wines. With regards to price, the lowest price points will have more of a negative impact on choice for higher involved consumers than for low involved consumers. Therefore, the recommendation that can be drawn from this research is that the lower price points should only be reserved for wines positioned for low involvement purchases.

Global wine purchasing behaviour

When considering the findings from the Australian versus the Canadian respondents, we do see differences in behaviour between the respondents in the two countries with regard to their use of product attributes. This suggests that wine producers and brand owners should be cautious of attempting to develop wine products that are undifferentiated across global markets. The findings of this study clearly indicate that, not surprisingly, wine consumers in different geographical regions utilise the attribute of region of origin in different ways. For example, this research indicates that, although consumers in both countries will be positively influenced by the display of a gold award on a wine, the Australian consumers will find this type of award more positively influential than the Canadian consumer.

Therefore, it is recommended that wine producers and brand owners clearly understand the positioning of their production region of origin within their consumption markets, allowing them to best utilise their geographical positioning opportunities.

The overall conclusion that can be drawn from this research study for wine producers operating is that 'one size does not always fit all' in terms of a wine brand sustaining the same position and likelihood to be purchased across different global marketplaces. What is clear is that, although the same wine fill and indeed packaging style may be suitable across a number of different markets, the way in which the wine is positioned in terms of the use of the available product attributes can clearly influence the likelihood to purchase. We have seen from the research evidence presented in this paper that there are clear cultural differences in the way that Canadian and Australian wine consumers behave – particularly in their attitude towards a wine based on their assumptions about the country or region of origin of that wine. The evidence therefore suggests that wine producers operating in any export market should first gain a clear insight into the cultural behaviour and beliefs of their potential consumers. Additionally, we have seen clear differences in the way that high involvement and low involvement consumers utilise some of the product attributes in the decision making process. We can therefore suggest that the brands owners who understand the characteristics of their target audience at an attribute level will have advantage in terms of rate of sales over their competitor producers.

Further Research

This research asks more questions than it answers. We have interpreted the utility values of four key attributes used in purchasing wine. However, it is the combination of attributes that determines choice. The next phase of this research should be to run extensive simulations of various combinations of attributes to better understand how high and low involvement consumers make their choices. Perrouy et al (2004) showed differences in how self-perceived experts versus novices combined attributes in making their choice decisions. This data set offers much the same opportunity to look more deeply into the differences of low and high involvement consumers from two countries. This would help us understand how consumers think about wines in two different countries and whether nationality or involvement is more important.

Another fruitful avenue for research would be to use a revealed choice data set from each country (panel data) and replicate the Jarvis and Rungie (2002) approach creating utility values for comparison to the stated choice ones. This would help wine marketers understand consumer purchase behaviour, but even more important, it would help researchers better design and use discrete choice experiments. As the wine market becomes more globalised, the need for better research methods also grows.

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Table 1A: Attribute Levels Used in the Australian Experiment (from highest to lowest)

Brands (Market share)	Regions (Saliency)	Prices (\$AUD) (per 750ml bottle)	Awards
Jacob's Creek	Barossa Valley	\$22.99	Gold Medal
Nottage Hill	Coonawarra	\$16.99	Bronze Medal
Lindeman's	Southeast Australia*	\$11.99	
Rosemont	Yarra Valley	\$7.99	.
Yalumba	Rutherglen		..
Taylors	Grampians		
Mouton Cadet	Côtes du Rhone		
Cellier des Dauphins	Coteaux du Layon		

*(not technically a region, but used in other research in export markets)

Table 1B: Attribute Levels Used in the Canadian Experiment (from highest to lowest)

Brands (Market share)	Regions (Saliency)	Prices (\$CAN) (per 750ml bottle)	Awards
Jacob's Creek	Southeast Australia	\$24.95	Gold Medal
Mouton Cadet	Ontario	\$17.95	Bronze Medal
Peller Estates	Cotes de Rhone	\$12.95	.
Robert Mondavi	California	\$8.95	..
Hardy's Stamps	Okanagan Valley		
Quail's Gate	Barossa Valley		
St. Supery	Napa Valley		
Cellier des Dauphins	Coteaux du Layon		

Figure 1: Sample Choice Task with Four Product Concepts from Australia

You are standing in front of a shelf of wine. Which one of these four bottles of Shiraz would you choose to enjoy over dinner tonight with friends?

Please note: If none of these wines suit, please choose the option "I would purchase none of these".

Hardy's Nottage Hill	Cellier des Dauphins	Lindemans	Taylors	
Yarra Valley	Coonawarra	Grampians	Barossa Valley	
...	Bronze Medal	..	Gold Medal	I would purchase none of these

\$22.99	\$11.99	\$7.99	\$16.99	
1	2	3	4	5

Table 2: Log Likelihood Calculations for Different Sample Splits

	Full sample	High involve	Low involve	Total	Difference	Chi-Square*
Australia	-8064	-3795	-4146	-7941	123	243
Canada	-9150	-3170	-3382	-6552	2599	5197

*chi-square with 24 df = 45 with a significance of 0.005

Figure 2: Comparison of Importance Weights for each Category for High and Low Involvement Australians and Canadians

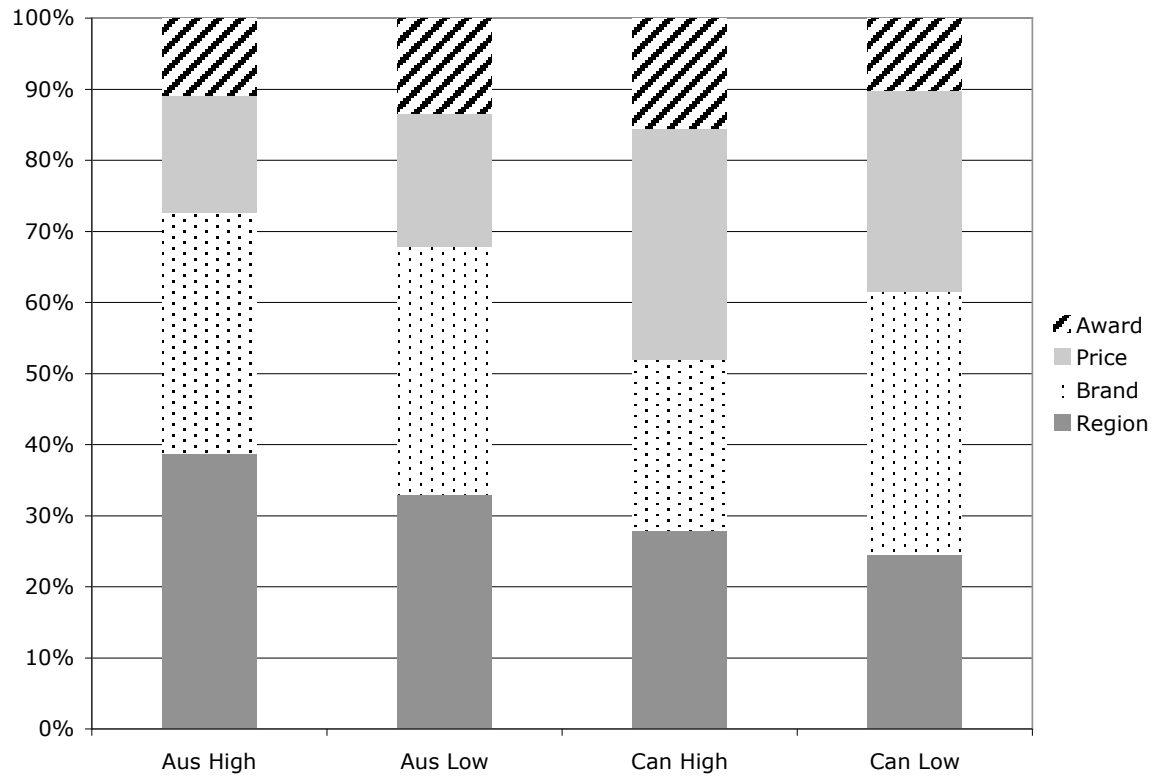


Figure 3 : Comparison of Choice Utilities by High and Low Involvement Wine Buyers for Brand in Canada and Australia

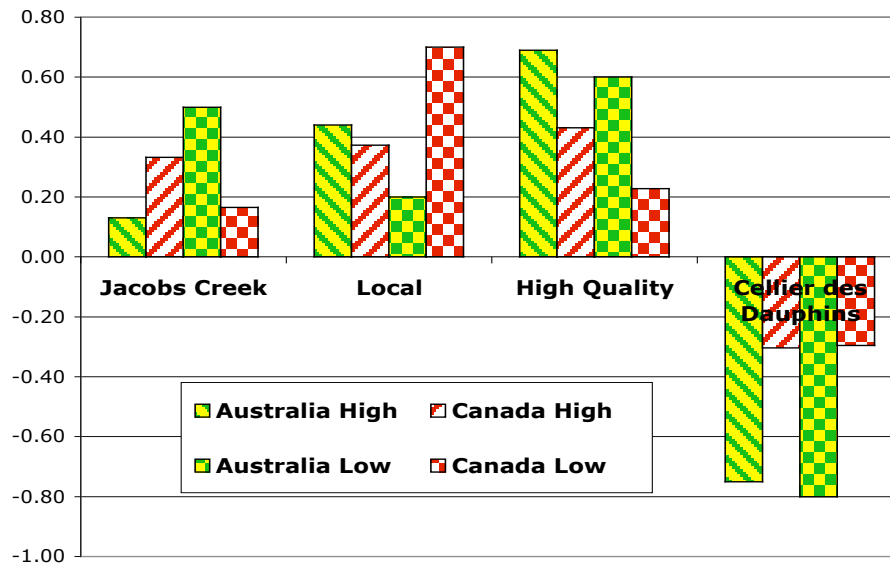


Figure 4 : Comparison of Choice Utilities by High and Low Involvement Wine Buyers for Region in Canada and Australia

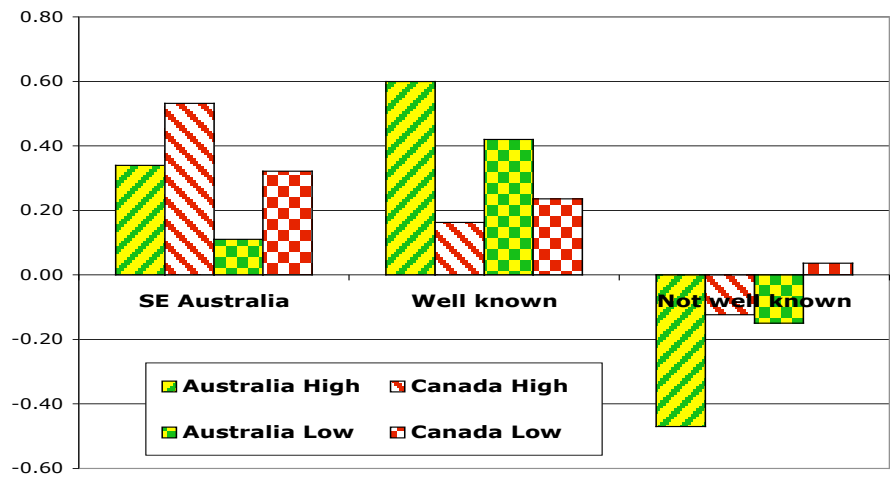


Figure 5 : Comparison of Choice Utilities by High and Low Involvement Wine Buyers for Price in Canada and Australia

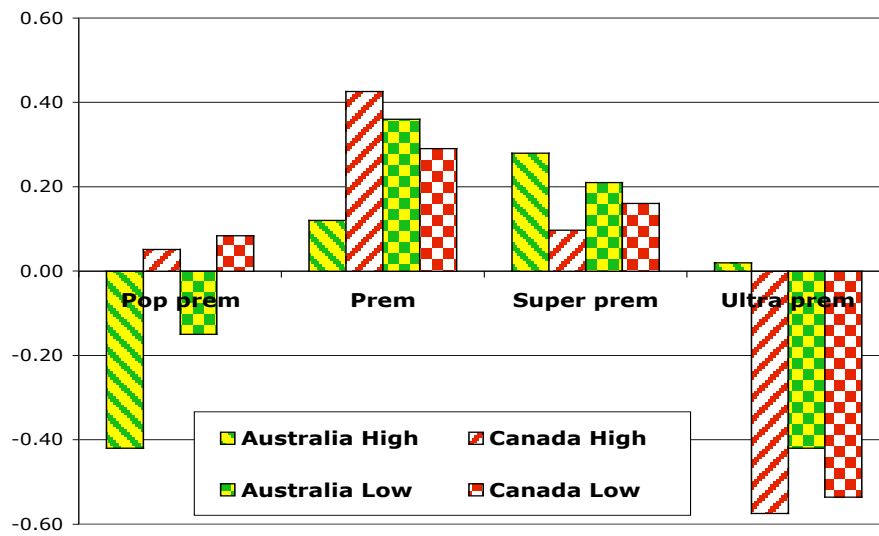


Figure 6 : Comparison of Choice Utilities by High and Low Involvement Wine Buyers for Award in Canada and Australia

